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‘Really on the ball’: exploring the implications of teachers’ PE-CPD experience

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Continuing professional development (CPD) is currently high on the Scottish Education agenda. Recent curriculum reform in Scotland, with the introduction of Curriculum for Excellence, places physical education (PE) at the forefront for its role in directly supporting learners’ mental, emotional, social and physical well-being. This emphasis on PE, along with concerns about the health of the nation, has resulted in a nationwide initiative providing non-specialist teachers of primary PE with the opportunity to develop a specialism in the subject through government-funded CPD programmes at postgraduate level. Using Knowles’ andragogical model as a framework, this paper reports data from a larger research study that evaluated a Scottish PE-CPD initiative. This paper comprises a single case holistic study investigating the impact and implications of a PE-CPD programme through the professional learning journeys, from the outset until completion, of four teachers: a nursery teacher, a class teacher, a cluster cover teacher and a PE specialist who participated in the programme. Data were collected over one academic year using two-stage questionnaire interviews and were analysed thematically with special attention given to the emerging general themes to achieve a holistic understanding of the case. Study findings endorse the positive impact of using the andragogical model of adult learning combined with the literature-supported characteristics of effective PE-CPD programmes. Teachers’ perspectives on their CPD experiences, integration of acquired learning into working contexts and teaching post-PE-CPD were then examined to determine the next steps. This led to critical reflection on the implications of the findings for the teachers’ ongoing professional development. We then challenged the role that university providers play in supporting teachers’ lifelong learning. Instead, we suggest new school-university partnerships and alternative ways to support capacity building and lifelong learning towards a sustainable transformational change in Scotland’s primary PE.

Keywords: *Physical Education; Continuing professional development; Curriculum for Excellence; Andragogical learning model; Learning community*

Introduction

Teachers’ continuing professional development (CPD) plays a significant role in education, mainly because it is recognised that ‘the quality of the education service depends, above all, on the quality of our teachers’ (Scottish Executive, 2003, p. 7). Following the report of the McCrone Inquiry into the professional conditions of service for teachers, an influential document ‘A Teaching Profession for the 21st

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Century' recommended 35 contractual non-teaching hours per annum, which incorporates CPD hours (Scottish Executive, 2001). Via CPD, teachers at any level are equipped with development opportunities aimed at assisting personal growth, enhancing professionalism and maximising teacher strength, with a view to impacting on the quality of learning and teaching and pupil performance. In Scotland, the Scottish Government in conjunction with the educational authorities, teacher organisations, the General Teaching Council for Scotland and other key stakeholders developed a national CPD framework; this has been in operation since 2000 (Scottish Executive, 2003). Needless to say, the recent national curriculum developments through the *Curriculum for Excellence* (CfE) have implications for suitable CPD programmes that can support teachers' practice within the current framework. Recently, the introduction of the national e-learning portal 'Glow' has paved the way for the introduction of a CPD Community (see <http://www.cpdscotland.org.uk/>).

Likewise, in the context of physical education (PE), Armour (2006) contended that 'finding ways to improve teachers' career-long professional learning is a compelling research agenda' arguing that 'the quality of pupils' learning in PE is dependent, to a large extent, on the quality of teaching' (p. 203). Although initial teacher education (ITE) is instrumental for training teachers to statutory standards, there are various reasons for teachers to engage in lifelong learning in order to help sustain ongoing quality teaching (see Penney & Jess, 2004). Coinciding with national curricular developments in Scotland (Scottish Executive, 2004a), there have been calls for a professional change in the way the PE curriculum is delivered (see Atencio, Jess, & Dewar, 2012). Perhaps this is due to PE being given a more prominent position: 'CfE crucially links PE with the development of learners' personal and social skills, talents, positive attitudes, and mental skills' (Elliot, Atencio, Campbell, & Jess, 2011, p. 6). Furthermore, the role of PE as 'a core activity linked to healthy lifestyles, lifelong learning, improved health, an inclusive society' (Scottish Executive, 2004a, p. 2) has been emphasised in the new curriculum by requiring two hours or two periods per week of PE for every pupil in Scotland between 5 and 16 years of age (p. 10). These recent policy and curricular developments bring into focus the significance of professional growth and teacher development in general, particularly in primary PE where it was found that teachers lack the knowledge, skills and confidence to teach PE due to the limited subject input in primary ITE (Blair & Capel, 2011; Elliot *et al.*, 2011; Morgan & Bourke, 2008).

Taking into account both Malcolm Knowles' seminal writings on adult learning and current research on effective professional development, Jana Hunzicker proposed a guideline for designing meaningful learning opportunities via teachers' professional development (2010, 2011). There have been a number of suggested guidelines towards effective CPD (see Armour & Yelling, 2004) but very few specifically take into consideration the characteristics of adult learners. In our evaluation of a postgraduate professional development programme in PE, teachers' perspectives on their CPD experiences, integration of acquired learning into working

contexts and views on continuing professional growth post-PE-CPD were then examined. It has to be stressed that an enquiry into the effectiveness of the programme delivered by the selected case study university was crucial; the research findings are intended to subsequently denote the future steps with respect to programme delivery and ways of supporting teachers' further professional development in particular and lifelong learning in general. However, insights from this study may challenge the conventional role that university providers play and in its place offer new ways of supporting capacity building and lifelong learning.

Three primary research questions guided our study:

- (1) What are the important elements of a primary PE-CPD programme and what impact does such a programme have on teachers?
- (2) What are the implications of programme participation for teachers' CPD and lifelong learning, specifically for the opportunities and challenges they face during the post-CPD stage?
- (3) In what ways does an effective professional development programme inform change in the way the programme is being delivered?

Theoretical framework

Adults' 'andragogical' model of learning

It is widely acknowledged that teachers' professional development is geared towards improving pupils' learning but it is also recognised that being adult means that their learning model is different from their pupils'. In Knowles' andragogical model, adult learning is equated to self-directed learning:

the learner is ... a self-directing organism and is put in the role of diagnosing his/her own needs for learning, translating these needs into learning objectives, identifying and using appropriate resources for accomplishing these objectives, and evaluating the extent to which they have been accomplished, with assistance from a facilitator as needed. (Knowles, 1979, p. 39)

Hunzicker (2011) argues that understanding adult learners' needs is core to delivering professional development programmes that effectively address teachers' personal and professional needs. Therefore, a closer look at Knowles' andragogical model (1973, pp. 45–49) as a framework for adult learning is essential due to its implications for teachers' continuing professional learning. Knowles stresses five key main characteristics of adults as learners:

- (1) *Strong yearning to learn.* For adults, the decision to learn is motivated by what is relevant to their respective contexts. Recognition of the immediate utility of learning exists even before embarking on it.
- (2) *Changing learners' self-concept.* According to Knowles, a person's maturity is a journey from dependency to self-directedness; self-direction is strongly associated with adults' self-concept. Therefore, adult learning should reflect, encourage and lead to self-directed and autonomous individuals.

- (3) *The learner's accumulated experience.* A wealth of 'experiential knowledge' not only defines who adults are, but it also offers a broad base for new ideas and skills, enabling construction of further knowledge. Adults enrich classroom discussions with their personal involvement, knowledge and life skills gained from previous experiences.
- (4) *Readiness to learn.* Adults' readiness to learn is mainly influenced not by their biological development but by the necessity to conform to changing social roles and job responsibilities (e.g. workers, parents).
- (5) *Orientation to learning.* For adults, learning is purposeful; the desire to learn is driven by the immediacy of applying one's learning, perhaps to solve a problem or to address teaching inadequacy. Adults start with a reason (serving as an incentive) supporting their decision to undertake learning.

Boulmetis (1999) argues that these characteristics of adults as learners are culture-free, pointing to a common thread, i.e. adults' 'basic need for control, a need for relevance from and a need for involvement in any learning experience' (p. 2). Because adult learners are self-directed and pragmatic learners, their primary concern is the anticipation of and testing the usefulness of what they learn to improve practice rather than preoccupation with the background theory and general information. This makes them selective, yet, focused on what and how they would like to learn, thus, exercising more control over their learning. Using the principles of constructivism, adults' accumulated knowledge and experiences play a key role in their learning process and work towards enhancing further learning. Unlike young learners, adults' sense of maturity arguably implies the strong influence of intrinsic factors on their learning motivation; they aim for a better self-concept, greater job satisfaction and/or an improved quality of personal life. Taken together, understanding the characteristics of adult learners gives substantial insight into the core features of the design and delivery of effective CPD programmes. Hunzicker (2011, p. 177) reflects further on adults' distinctive approach to learning:

...adult learners approach learning with clear goals in mind, using their life experiences to make sense of new information. They are motivated by opportunities to address problems – and create solutions – that relate directly to their lives. They...function best when they have a voice in the direction and pace of their learning.

Features of an effective PE-CPD programme

Rich literature exists on effective CPD delivery (see Armour & Yelling, 2004; Day, 1999; Guskey, 2002) leading to calls for a different PE-CPD approach that radically changes practices and impacts upon pupil learning. A number of specific features of effective CPD programmes are underpinned by literature and are characterised by:

- (1) expert delivery focused on improving pupil learning (Stein, Smith, & Silver, 1999) towards increased content knowledge and general pedagogies in relation to child development and changed attitudes and beliefs (Guskey, 2002);

- (2) professional development that is beyond mere acquisition of subject knowledge and teaching skills but involves a renewed commitment to improve their pupils' lives 'demand[ing] emotional commitment' and 'involv[ing] the head and the heart'; CPD encompasses the 'personal, moral and political dimensions of teaching as a professional activity' (Armour & Yelling, 2004, p. 98; Day, 1999, p. 47);
- (3) adequate duration of the programme enabling opportunities for linking theories and practical skills, with adequate support as new learning is integrated with practice as opposed to a series of 'one-shot' CPD activities (Armour & Yelling, 2004);
- (4) learning coherence by considering teachers' previous teacher learning, experiences and future goals (Garet, Porter, Desimone, Birman, & Suk Yoon, 2001; Lawson, 1983) in order to strengthen the notion of contextualised CPD and learning beyond PE;
- (5) relevance of CPD for teacher and school contexts (Stein *et al.*, 1999); stressing 'the nature and purpose of existing PE-CPD provision within the wider CPD framework in education' (Armour & Yelling, 2004, p. 96); and
- (6) planning a path towards further professional development and career progression for PE teachers (Armour & Yelling, 2004).

In an effort to address the shortcomings of previously available PE-CPD programmes, and to aim for a more effective model that meets teachers' needs, these features were adopted, informing the structure and content of the professional development programme in our study. Furthermore, central to the delivery of the programme is the combined effort of a team of professional developers who share a clear vision of the purposes and the outcomes of the provision. The working partnership among a team of university staff members and colleagues from the educational authorities, including teacher practitioners and Quality Improvement Officers (QIOs), affords each course a strong blend of theory and practice.

Methodology

It is argued that modern social science is often confronted with issues that cannot be addressed with the use of an extensive approach (e.g. surveys) alone (Swanborn, 2010). Chambers and Armour (2011) elucidate on how the nature of the question asked may require in-depth qualitative data collection through a case study design as it affords 'detail in reporting' and an 'insightful picture' into the case(s) studied (p. 536). A case study is considered appropriate when investigation is characterised by 'a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident' (Yin, 1994, p. 13). Our study uses a case study approach: 'the study of a phenomenon or a process as it develops within one case' (Swanborn, 2010, p. 9), where the phenomenon refers to the impact and implications of a PE-CPD programme and may involve individuals at the organisational or institutional level (Swanborn, 2010,

p. 6) in order to increase understanding of the phenomenon being studied in the context in which it is situated. Using a holistic qualitative approach, we included a 'small' number of exemplifying cases or sub-units, i.e. not more than four or five with the aim of investigating the phenomenon (Swanborn, 2010) in a real-life context. Permission to conduct this research was granted by the ethics committee, at the researchers' university following rigorous review procedures. Participants' consent to participate was duly sought prior to collecting data.

The data presented here are drawn from a larger study that involved evaluating the Postgraduate Certificate in Primary Physical Education (PGCPPE) and 3–14 programmes delivered by the Universities of Glasgow and Edinburgh to all 32 local authorities in Scotland. Although the project had the same funding source and considered the same phenomena, i.e. the impact and implications of a PE-CPD programme, differences between the two universities in both the content of the programmes and of delivery models naturally allowed independent analysis. For this article, four two-stage semi-structured interviews from the original University of Glasgow population were conducted. A purposive sample was drawn for 'building in variety and acknowledging opportunities for intensive study' (Stake, 2000, p. 446). The four teachers, classed as sub-units (Swanborn, 2010), and representing different posts and school contexts within the umbrella case, were self-selected after completing the questionnaire sent out to teachers who participated in the 18-month programme between 2007 and 2011, and further agreed to be interviewed in-depth at the outset and after programme completion. Categories employed in the selection of the four interviewees included: (1) teacher's post, role and remit, and (2) presence or absence of school's support in PE activities. Whereas initial discussions focused on gathering background demographics, reasons for participation and school culture, follow-up interviews endeavoured to capture teachers' observed changes in their practice and relationships with other school community members. Likewise, implications of programme participation for their professional development were examined. Stake (2000) has suggested that researchers must exercise great caution in order to minimise research-related risks. At the end of the interview, researchers offered a briefing of the key ideas participants raised during the interview for validation purposes; pseudonyms were also employed to safeguard participants' identity.

Following Yin's (1994, p. 32) advice in establishing the quality of empirical social research, including case studies, some strategies were put in place. With respect to 'establishing correct operational measures for the concepts being studied' to enhance construct validity (Yin, 1994, p. 33), the development of the interview guides was informed by the key issues raised in the primary PE literature concerning the status of PE in schools, ITE and PE-CPD experiences and professional entry into workplace contexts (Carney & Guthrie, 1999; Duncombe & Armour, 2004; Her Majesty's Inspectorate of Education (HMIE), 2001; Scottish Executive, 2004b; Warburton, 1989). Moreover, aiming to establish data coherence, researchers linked participants' responses to the first interview (e.g. reason(s) for programme participation, primary PE school contexts) to their evaluation of the programme in

general. There was also deliberate effort to establish a 'chain of evidence' by focusing on the questions that the case study was designed to address as precisely as possible (Yin, 1994, p. 98). Whenever applicable, participants' responses were probed and examples were sought for their claims and arguments, especially in relation to their respective primary PE school contexts. Nevertheless, due to the nature of the case study design, the findings of this study are not intended to be generalised to a large population (Stake, 2000; Swanborn, 2010; Yin, 1994), but rather to capture insight and particularity that can help illustrate certain ideas related to the phenomenon studied within the case of one university.

All interviews were transcribed verbatim prior to data management and analysis. Post-field analysis involved vertical (or structural) and horizontal (or thematic) analysis to enable holistic understanding of each teacher's unique context. More specifically, reading, re-reading and reflection on the transcripts and field notes were undertaken to increase familiarity and sensitivity to the emerging concepts and themes. Focused reading steered the coding process, which then informed further reflection, explanation and interpretation of each thematic code. As an example, 'andragogy model' was used as a code to which observed andragogy-related remarks, from phrases to paragraphs, across sub-units were attributed. This code was given a designated memo to contain further reflection and interpretation on the subject in the light of researchers' knowledge of the literature in general, and of the Scottish PE context in particular. Abiding by the principles of thematic analysis, priority was given to examining the 'general phenomenon', i.e. identified common themes arising from data comparison among sub-units, rather than the 'accidental instances', i.e. a theme obtained from only one (or two) of the sub-units (Swanborn, 2010, p. 8). In doing so, a degree of flexibility was afforded where identical passages fit into two (or more) thematic codes. Taken together, this approach to analysis served to address the research questions.

Results

A careful scrutiny of the four teachers' experiences generated five main themes arising from their personal views and experiences of the effectiveness, impact and implications of the PE-CPD programme for their lifelong learning. The five themes are as follows: (1) experiencing the andragogical model of adult learning, (2) transforming one's attitude towards PE, (3) crystallisation of CfE principles, (4) influencing teachers' competence, confidence, knowledge and skills and (5) a common need for a learning community. Table 1 provides a summary of the participants' profile and their school contexts.

Experiencing the andragogical model of adult learning

Abigail's initial decision to participate was influenced by the feedback given by other teacher participants who found the programme 'really, really good'. Experiencing it

Table 1. Four PE-CPD programme participants.

Participants	Teacher roles, experiences and school contexts
Abigail	Abigail is a nursery teacher whose remit involves managing the whole nursery team in implementing different activities, including PE. Abigail has a personal interest in PE and considers the curricular shift to the CfE framework and concern over the current practice of nursery PE as a catalyst for undertaking the PE-CPD programme. Her school has taken a very positive view of PE manifested by a) support towards pursuit of PE specialisation; b) practising two hours of PE provision; c) PE facilities and resources provision; and d) promotion of health-related initiatives.
Rhesa	Rhesa originally qualified in secondary PE and currently works as a PE specialist in rural primary schools following re-training as a primary teacher. Doing peripatetic PE often meant working 'in isolation' prompting her to question her own competence in teaching the subject and to update her skills. The little support and value that the school management gave to PE teaching compounded by the scarcity of available PE-CPD training seminars and isolated teaching compounded Rhesa's yearning to undertake PE-CPD.
Chiara	Chiara has spent six years working as a cluster cover teacher for four different schools with a varied remit covering curricular areas from Primary 1 to 7. She acknowledged her difficulty in delivering PE: 'the hardest to cover for' but also admitted how she 'loved' the subject and thus urged her to do the course. Her experience pointed to the different values accorded to PE in the various schools in which she worked, where PE was either celebrated and thriving or where it remained a low priority, even deemed a 'problem' due to the lack of school facilities and resources.
Anthony	Anthony was a class teacher at the outset of his PGCPPE participation and during the course, he became the new Head Teacher in another primary school. His interest in sports, athletics and competitions, and professional growth were his primary reasons for undertaking the programme. Anthony considered the PGCPPE programme an ideal opportunity for professional development due to the paucity of PE-CPD provision.

first-hand, Abigail explained that it was the support provision and equal attention given to theory and practice that underpinned the enjoyable learning experience:

...it was very accessible. The tutors...were able to give us a lot of good, practical ideas to take away as well as discuss the theory behind it [and] to research into the theory behind PE...it was practical and theory based.

Similarly, being a learner again has satisfied Rhesa's thirst for learning: 'the whole learning process, I enjoyed it more than I anticipated I would'. Rhesa's programme participation made an impact in different ways. First, her secondary PE background enabled her 'to go back and really put...into practice straight away' newly acquired knowledge and skills because adults need to 'test their learning as they go along'; their primary concern is the practical usage of their learning rather than merely understanding the background theory and general information (Boulmetis, 1999).

Implicitly acknowledging the value and suitability of the PE-CPD programme, Chiara who initially heard positive compliments about how it was 'a great course', was able to offer personal comments after participation: 'it's the best course I've ever done' due to the overall 'interesting' delivery and 'pertinent, useful' course content. Finally,

Anthony explained that although his school was very supportive of providing opportunities for PE-related courses, the lack of PE-CPD provision (Armour & Yelling, 2004) acted as a barrier. The programme was viewed as an eye-opener for more effective PE delivery and was seen to have a great impact on the whole school community. As explicitly stressed by the four teachers, the perceived and experienced usefulness, as well as the immediate utility of the lessons obtained seemed to have fulfilled the individual goals that they had when they first signed up for the programme.

Transforming one's attitude towards PE

For Abigail, securing an expert understanding of children's motor development and age-appropriate activities for learning PE also fuelled practical applications and utility concerning 'how the different body parts work, how different games can do different things'. This resulted in 'looking at children in a different way' with constant assessment of the things that they are capable of and tailoring them to meet their changing needs. For example, a special programme (consisting of creative dance, ball skills, ring games and a parachute) was put in place to give young children enjoyment and give them 'a good handle on developing a certain amount of skills' while developing cooperation and team working abilities. The practical impact of the programme gave them a workable theory-based programme and prevented mere repetition of activities leading to boredom or poor skill development. It is noteworthy that for Abigail, her increased belief in the value of PE has transformed her attitude towards the subject, thus enabling her:

...to be able to justify PE in the curriculum, with the curriculum being so overloaded and packed...why PE is so important in the curriculum and why it deserves its place there.... It can have a great impact on the whole child for the rest of their life....

Taking Chiara's example, her programme participation affected her own teaching and learning beliefs about PE, enabling her to see how it is a fundamental aspect of the education process. In turn, it helped her realise that PE is, in fact, a much more valuable subject and plays a bigger role in children's overall learning processes:

I've always enjoyed teaching PE, but I see it as a much more valuable subject than I used to... [it is] not just physical activity in school... you need to be physically fit to learn... physical activity stimulates the brain and helps children to concentrate and focus... [and gives them] confidence.

As for Anthony, his view of the PGCPPE programme is summed up in his response to the question: were your initial reasons for undertaking the programme adequately addressed?

Yes, definitely. It increased my own personal opinion of the effectiveness of PE and its place in the curriculum....

In addition, his attitudinal change also related to PE delivery. The programme was a catalyst for him becoming an advocate for having external expertise integral to PE

delivery. Schools, he argued, should not be discouraged if they lack expertise in one area because employing other people's expertise is a healthy alternative, and thus, a means of delivering 'meaningful opportunities for children'. What is clearly demonstrated by these teachers is not only an increased knowledge of PE teaching pedagogy, but even more importantly, a transformed perspective of this subject being central in the whole education process.

Crystallisation of CfE principles

Teachers argued that the benefits of the programme went beyond enriching PE-focused teaching competence and understanding of pedagogical strategies. For example, Abigail found the lessons applicable for developing 'the whole child in Curriculum for Excellence': '[It] helped my understanding of Curriculum for Excellence, not just in PE but overall, what these capacities all meant...it enabled me to perform better [in] teaching'. Likewise, Rhesa acknowledged the programme's role in enhancing her understanding of teaching pedagogy in relation to CfE. The programme 'put [things she already knew] from a completely different perspective' with emphasis on interdisciplinarity.

Chiara further expounded how the PE-CPD programme was instrumental in crystallising the principles underpinning the CfE framework:

...the Curriculum for Excellence, other people are sort of worried about it and confused by it, and I think this course has just made it so easy. Everyone should be taught the Curriculum for Excellence through PE, because you can see how it practically implicates and impacts on your classroom, as well as the PE side of it.

Furthermore, Chiara maintained how teaching PE's interlinking with other subject areas was clarified: '[the] course really made Curriculum for Excellence come alive in a way that wasn't scary and you could put into practical strategies in your classroom', for example, by 'looking at the way [children] move in gym and then drawing it in art...the way the body is shaped when you're running, skipping, hopping [using] that...as part of the art curriculum to look at the human body as well'.

Influencing teachers' competence, confidence, knowledge and skills

Abigail strongly expressed the view that PE-CPD participation enabled her to improve her teaching performance not only in PE but as a teacher in general. Along her journey, her knowledge, skills and confidence in teaching PE and how it fits in with the new curriculum has improved (while also grasping a more solid understanding of the importance of PE). On reflection, she suggests that the 'ongoing' nature of the PGCPPE as opposed to short-term 'sporadic one-off, one-day, off-site' CPD provision for teachers was more useful (see also Armour, 2006, p. 204; Hunzicker, 2011) allowing constant opportunities for application and reflection, which are necessary for becoming reflective practitioners.

Prior to joining the programme, Rhesa admitted questioning her own competence in teaching the subject and updating her skills: 'I just felt what I was doing was very dated, and ... for me it was a bit boring, I needed new, fresh ideas ... to bring it up to date'. Her enjoyment of 'the whole learning process' led her to put into immediate application newly acquired knowledge and skills. Each lecture reminded her of the learning needs of a particular child or children, inspiring immediate application. It also 'totally' changed her approach to PE delivery, making it more active and inclusive. In fact, for Rhesa, the main impact resulting from her programme participation lay within 'the integration of children with special needs into mainstream PE'. Rhesa's heightened knowledge of inter-disciplinary learning led to her being given a key role at an educational authority-wide level. On a personal level, Rhesa acknowledged how her experience had 'greatly boosted [her] confidence', which then inspired her to bring about radical changes to the school's sports day: '...our sports day in the summer had been ... the same for ... many years ... I ... changed ... and ... completely revamp[ed] it [to] make it more inclusive'.

In the same vein, Chiara stresses how the whole programme contributed to her increased knowledge, skills, confidence and competence: 'The lecturers are really on the ball, everything has been interesting and pertinent, useful'. Chiara further reported how this greatly contributed to her PE teaching performance with a number of pupils from different schools. Finally, Anthony claimed that engaging pupils—a pedagogical strategy based on a philosophy of the PE course to make pupils 'understand' the rationale for the activities contributing to more personal, engaging, meaningful and productive teaching and learning—was the most important lesson that he learned. This resulted in his lessons becoming more 'context-based', 'inclusive' and 'relevant to their stage of development' and, thus, creating more impact on pupil learning. Anthony explained that if pupils are 'really interested in something, then that has a bigger impact on [them]'. He attributed his enthusiasm, which he thought had a 'domino effect' on pupils, to his programme participation and this has had a further effect on Anthony's relationships with colleagues. '[Other teachers] saw [that] the experiences that the children were getting and the kids' enthusiasm' after he started with the programme, were making a difference. As a result, it encouraged some to join the programme as well and pursue a career in PE: 'one of [my] colleagues is doing the PE course this year. She has seen how much fun it is and how much the kids enjoy it and how much you learn from it'. For Anthony, the programme has 'definitely met its [learning] outcomes' significantly contributing to his 'professional' growth.

A common need for a learning community

Acknowledging the crucial role of the programme tutors in her progress, Abigail stressed the importance of access to information and participation in a support network with like-minded colleagues. Similarly, based upon Rhesa's experience of the programme, 'the stimulation, mixing with other people, speaking about things, the opportunity to discuss things and the practical ... spurred [her] on to go and do

something else'; this describes the education process for adults learners whereby 'learners come to see education as a process of building up their own personal competencies rather than accumulating credits...or other brownie points' (Knowles, 1979, p. 37). Her new-found community afforded discussion of issues, debating current challenges, exchanging ideas and seeking support for matters they all deemed critical while socialising and building up rapport. Rhesa suggested that 'realising what's going on in...other schools in similar situations' was interesting and informative. She recognised the value of such interactions, even claiming that this is:

when a lot of other learning can happen, when you've got the opportunity just to speak to people. The contacts I have made with the people that were involved in the course, from the university and other colleagues on the course...has opened up lots of additional supportive ideas that [I] wouldn't have had.

In this connection, Chiara strongly argued that the important lessons learned from the programme will only bear fruit if applied and cascaded to other staff members with the support of the school management team—an area that needs addressing: 'We've got all these [PE] enthusiasts out there now ready and they've been trained, but we need somebody to say "We need to use these people"'. Furthermore, in Anthony's view, PE learning through the programme should not stop with the course participants themselves. There needs to be a way to 'cascade' knowledge, approaches and skills to other teachers. After all, the programme was 'a great experience' and is worth sharing. Anthony believes in the value of providing '[more] CPD opportunities...that [teachers] could engage in [to] give them a bit of an eye opener into PE and how it could be taught...or [having] people that have been through the course...[going] out and...[sharing] some CPD opportunities...with...teachers'.

Discussion

Emerging findings from the case study involving four teachers have presented interesting and useful insights, some of which are specific to PE teaching delivery, while some afford more in-depth understanding in relation to teacher development in general. The teachers represented typical adult learners, whose learning was purposeful, task-centred and problem-centred (Boulmetis, 1999; Knowles, 1980). First, taking Knowles' (1973, 1980) andragogical model of adult learning, teachers demonstrated that the programme was tailored to address adult learners' distinct characteristics, i.e. the need for active involvement and control, with strong views on the purposefulness of learning, relevance to context, immediate utility and a view to improving performance. The sense of enjoyment and perceived impact were strongly conveyed by the teacher participants, arguably, due to the explicit alignment of their reasons for joining the programme, characteristics as adult learners and the professional development received. This conforms to Hunzicker's (2011) notion of 'effective professional development', which is characterised by learning activities that are 'supportive, job-embedded, instructionally focused, collaborative and ongoing'. Hunzicker (2011) further argues that 'with these characteristics in place, teachers are

more likely to consider professional development relevant and authentic, [making] teacher learning and improved teaching practice more likely' (p. 177). Arguably, it should also be taken into account that a longer PE-CPD programme (the PGCPPE delivered 100 hours of CPD over a period of 18 months) provided opportunities to reflect, and test lessons learned (Armour, 2006) as well as form mutually beneficial informal networks of like-minded individuals—'a set of actors ... [with] direct and indirect ties that exist among them' (Wasserman & Faust, 1994 cited in de Lima, 2010, p. 4). In this vein, Hunzicker (2011) suggests that 'professional development is most effective when teachers have multiple opportunities to interact with information and ideas over several months' (p. 178). Second, the four teachers asserted that they experienced increased competence, confidence, knowledge and skills in such areas as planning, pedagogy, curriculum and children's development, leading to professional growth, most notably in Rhessa's case where her participation led to empowerment and increased trust given to her at the school and educational authority-wide levels. According to Talbot (2008, p. 7), the best quality PE she ever witnessed in primary schools was 'delivered by primary teachers who were not physical education specialists, but specialists in children's development' as this underpins their overall approach to teaching. Furthermore, there is evidence that the impact of the programme went beyond teacher appreciation of child-centred, inclusive or child-led practice. We argue that teachers' reflection on their PE-CPD experiences resulting in a transformed attitude towards PE—a likely outcome of CPD programmes (see Blair & Capel, 2011)—is equally important as it stimulated and inspired their subsequent actions. Not only did an in-depth understanding of the subject increase teachers' recognition of the subject's value but it was also instrumental in raising their confidence as they expressed a stronger voice in schools and communities, at times, even becoming 'change agents' pursuing PE-related causes (Day, 1999, p. 4). Arguably, more people recognising PE's importance creates an upward spiral, raising the subject's overall profile. Third, the seeming evidence of the impact of the PGCPPE programme has been extended to the wider teaching context. Again, not only did the explicit paradigm shift about PE lead to PE delivery approaches that give due regard to child development theories, teachers also claimed that the programme itself was 'a catalyst for ideas' fostering clearer links between PE and other elements in education aiding their understanding of the whole learning process. It was also strongly suggested that the programme acted as a mechanism for crystallising CfE principles, for understanding how PE fits into this new curriculum, and for clarifying where PE is situated in relation to other disciplines. This accords with what Hunzicker (2011, p. 178) contends: 'Teachers take job-embedded professional development seriously because it is "real"'. CfE is new and thus, entails a lot of challenges; it is not, therefore, surprising that teachers were motivated to understand the framework further via PE-CPD. Finally, taking further the characteristics of adult learners, i.e. their motivation to learn, yearning for active involvement and their 'psychological need to be self-directing' (Knowles, 1980, p. 99), participants suggest the crucial importance of forming a support network or a learning community. Citing Donald Schon, Knowles describe how 'learning

communities' are vessels to 'encourage, support and provide resources for their members to grow and develop – change – continuously throughout their lives' (Knowles, 1979, p. 36). Wenger (2006, p. 1) describes 'communities of practice' as 'groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly'. Learning communities are a form of professional socialisation—an avenue for promoting a professional dialogue, cascading knowledge and skills, and seeking support from like-minded people while providing opportunities to challenge thinking further. Arguably, not only does it make learning both a means to an end and the end itself (Wenger, 2006), it also reverses the sense of 'isolation' common to a number of teachers (Lieberman, 2000, p. 222; Ward & O'Sullivan, 1998). Likewise, professional enquiry via practitioners undertaking their own research (see Menter, Elliot, Hulme, Lewin, & Lowden, 2011) could possibly be a result of collaborative meeting of minds, or take place independently of the learning communities; this may prove to be complementary to the learning communities in giving teachers a more prominent role in their pursuit of lifelong learning.

Conclusion

Professional development programmes for teachers, if designed with adult learners in mind, can improve approaches to learning and teaching while increasing recognition of the subject area's importance and helping to promote a clearer understanding of the curriculum in which the subject is situated. Nevertheless, it could be argued that participation in effective CPD programmes is just the beginning of further teacher development and lifelong learning (Penney & Jess, 2004). This resonates with Stein *et al.*'s (1999) suggestion that there is a 'need for professional developers to take greater responsibility for the outcomes of their development activities' (p. 257). CPD developers and providers need to recognise that their responsibilities go beyond CPD delivery; it is essential to consider the next steps, specifically, along with feasible ways in which CPD providers can contribute by creating support networks to maximise the impact of their CPD provision. Communities of practice are proposed to be suitable in the educational context (Wenger, 2006) allowing teachers to seek new professional development models and evaluate their impact. Teacher engagement in continuous learning is argued to be a form of capacity building in three categories: personal, interpersonal and organisational (Stoll, 2009, p. 117). It is worth remembering though that CPD deliverers, senior management teams and the teachers themselves have significant roles to play in the capacity building of adult learners through the formation of 'communities of practice', which could potentially lead to the emergence of leaders of professional change in the area and a greater impact on the wider community. Knowles reminds us though that despite adults' tendency for self-directed learning and mutual support, growth and development remains critical: 'you don't just throw them into the strange waters of self-directed learning and hope that they can swim' (Knowles, 1980, p. 79). Armour and Yelling (2004) contend that:

the most difficult aspect of taking “an enquiry as stance” approach to profession development is providing the impetus, framework and support to ensure that it begins to happen and then develops progressively. Teachers can't do this in isolation, but in collaboration with professional colleagues, they could. (p. 107)

If the next and higher level to teacher professional growth and development were to be supported, the implications for the key players rightfully deserve attention. Firstly, there is a challenge that Armour and Yelling (2004) pose to PE-CPD providers, i.e. ‘to redefine a niche in the changing teacher development landscape and to find new ways of both conceptualising and providing expertise and support’ (p. 110), whereby ‘teachers in their professional learning communities or networks play a leading role’ while external advice and expertise are provided when required (Armour & Yelling, 2007, p. 177). PE-CPD providers need to extend their vision beyond existing PE-CPD provision as teachers move on to the realisation of lifelong learning. Secondly, teachers’ natural inclination for self-directedness (Knowles, 1980) can assist them as they continue to satisfy their thirst for learning through active involvement in learning communities, practitioner research and/or other relevant activities while leading and playing key roles. Third, other partners including educational authorities and senior management teams need to realise that teachers require an outlet for what they learn through the CPD, and thus appropriate support from them is imperative. In the same way that the programme we evaluated was delivered in the spirit of collaboration and a shared vision of the purposes and outcomes of the provision, we strongly argue that in order to nurture and facilitate teachers’ pursuit of lifelong learning post-CPD provision, the same spirit of partnership from the teachers, university teachers and school management is indispensable.

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